# Nephrology Dialysis Transplantation

## Registry Report

## **EDTA Registry Centre Survey, 1985**

Report from the European Dialysis and Transplant Association Registry\*

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Abstract. This paper summarises the information given on the 1985 EDTA Registry centre questionnaire which was returned by 82% of 1959 known dialysis and transplant units in 33 European countries. Trends in the use of different forms of renal replacement therapy are discussed, and attention drawn to the discrepancy between the EDTA centre and individual patient questionnaires as a source of demographic information on dialysis and transplantation. The results of special questions on dialyser re-use, dialysis equipment, AIDS, and hepatitis are presented, and information obtained from the special paediatric section of the centre questionnaire is also given.

Key words: EDTA Registry; Centre questionnaire 1985; Trends in RRT; Dialysis equipment; AIDS; Treatment of children

#### Introduction

The Registry of the European Dialysis and Transplant Association—European Renal Association (EDTA Registry) collects data from two sources: an individual patient questionnaire and a centre questionnaire. The centre questionnaire requests summary data on a unit's activity during the year, and also includes questions on topics of special interest. In contrast to the patient questionnaire, the format of the centre questionnaire is varied from year to year around a basic core of questions. These core questions relate to the demography of dialysis and

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Table 1. Summary of centres known to the EDTA Registry in 1985, the number per million population (PMP) and the proportion (per cent) returning the 1985 centre questionnaire. Population figures are taken from the most recent World Bank Atlas [3]

Country Population Known Known % Replied in millions centres centres **PMP** 0.3 21.265 Algeria 85.7 7.527 27 3.6 100.0 Austria Belgium 9.856 59 6.0 91.5 8.960 38 4.2 97.4 Bulgaria 0.665 6.0 100.0 Cyprus 4 27 Czechoslovakia 15.464 1.7 100.0 11 Denmark 5.110 2.2 100.0 31 0.7 46,172 61.3 Egypt Fed Rep Germany 61,205 331 5.4 77.0 Finland 4.902 27 5.5 100.0 55.089 3.9 89.8 France German Dem Rep 16.701 3.2 100.0 51 5.2 Greece 9 888 62.7 10.692 1.2 100.0 Hungary 13 Iceland 0.240 l 4.2 100.0 3.533 1.4 Ireland 100.0 Israel 4.172 7.0 100.0 392 6.9 57.033 67.3 Italy 27 Lebanon 2.624 14.3 Libya 3.620 3 0.833.3 13.7 Luxembourg 0.365 100.0 Morocco 21.347 0.2 20.0 50 Netherlands 3.5 14 411 82.0 17 Norway 4.151 4.1 100.0 Poland 36.918 54 1.5 94.4 40 3.9 Portugal 10.202 82.5 38.523 199 5.2 89.4 Spain 42 97.I Sweden 8.337 35 Switzerland 6.572 38 5.8 97.4 7.068 1.4 100.0 Tunisia 10 48.266 19 0.4 84.2 Turkey United Kingdom 67 1.2 94.0 56.327 Yugoslavia 22.955 87 3.8 69.0 3.2 82.0 Total Registry 620,160 1959

Table 2. Summary of new patients accepted onto renal replacement therapy during 1985 in Europe; based on data from the centre questionnaire, supplemented by National Keymen. Both the absolute number of new patients and the acceptance rate per million population are given for each country

Country	Data available % centres	New patients in 1985 n	Per million population
Algeria	85.7	81	3.8
Austria	85.2	522	69.4
Belgium	91.5	610	61.9
Bulgaria	89.5	291	32.5
Cyprus	100.0	32	48.1
Czechoslovakia	96.3	361	23.3
Denmark	81.8	221	43.2
Egypt	38.7	318	6.9
Fed Rep Germany	63.1	3 635	59.4
Finland	85.2	220	44.9
France	72.2	2 366	42.9
German Dem Rep	100.0	534	32.0
Greece .	54.9	573	57.9
Hungary	92.3	202	18.9
Iceland	0	0	0.0
Ireland	100.0	170	48.1
Israel	75.9	245	58.7
Italy	54.6	2 670	46.8
Lebanon	14.3	0	0.0
Libya	33.3	24	6.6
Luxembourg	80.0	19	52.1
Morocco	100.0	78	3.7
Netherlands	90.0	711	49.3
Norway	76.5	149	35.9
Poland	79.6	385	10.4
Portugal	67.5	497	48.7
Spain	78.9	1 830	47.5
Sweden	77.1	518	62.1
Switzerland	86.8	385	58.6
Tunisia	80.0	139	19.7
Turkey	63.2	240	5.0
United Kingdom	100.0	2 427	43.1
Yugoslavia	56.3	742	32.3
Total Registry	70.6	21 195	34.2

transplantation and include items such as the number of new patients accepted for treatment and the number of grafts performed.

Demographic information published by the Registry is based on returns to both the individual patient and centre questionnaires [1,2]. These sources often yield different figures. The reasons for this are varied and include incomplete registration of individual patients, a discrepancy between the number of centres which return centre and patient questionnaires, and some double reporting on the centre questionnaire. Demographic information based on returns to the centre questionnaire is usually available prior to that derived from the patient questionnaire.

Both patient and centre questionnaires are mailed at the end of each year. Centres which do not return the centre questionnaire by a specified date are sent a reminder, and if they fail to respond, an attempt is made to ascertain the missing information through National Keymen, who work closely with the Registry. Table 1 summarises centres known to the Registry in each of the 33 countries which report, the number per million population, and the proportion returning the 1985 centre questionnaire. Units which returned the questionnaire did not necessarily provide all the information requested.

This article is based on data provided in the 1985 centre questionnaire, and the returns, shown in Table 1, have in some cases been supplemented by information from National Keymen (Tables 2-5).

# Demography of Dialysis and Transplantation in 1985

Table 2 summarises numbers of new patients accepted onto renal replacement therapy during 1985. The Table shows the proportion of centres for which data were available either from the centre questionnaire or through the

Table 3. Total number of patients alive on different forms of renal replacement therapy on 31 December 1985: based on data from the centre questionnaire, supplemented by information from National Keymen. Total number of patients alive on renal replacement therapy at the end of 1985 is shown as an absolute number and is also expressed per million population

Country	Patients	on treatme	nt at 31	Decemi	er 1985		
	Hosp. HD	Home HD	IPD	CAPI	With funct.	Total	Per mill. pop.
Algeria	235	3	0	35	0	273	12.8
Austria	1 391	47	2	22	461	1 923	255.5
Belgium	2 234	106	8	152	777	3 277	332.5
Bulgaria	881	50	1	2	23	957	106.8
Cyprus	122	0	0	0	0	122	183.5
Czechoslovakia	878	2	5	2	316	1 203	77.8
Denmark	467	61	43	182	217	970	189.8
Egypt	927	0	97	14	120	1 158	25.1
Fed Rep Germany	13 835	1285	121	369	3 028	18 638	304.5
Finland	265	2	6	182	785	1 240	253.0
France	9918	2157	150	856	2 964	16 045	291.3
German Dem Rep	1 676	0	9	4	588	2 277	136.3
Greece	1 101	95	0	188	136	1 520	153.7
Hungary	453	0	38	5	161	657	61.4
Iceland	12	0	0	4	0	16	66.7
Ireland	229	22	1	50	329	631	178.6
Israel	858	48	65	218	286	1 475	353.5
Italy	11674	763	100	1250	1 347	15 134	265.4
Lebanon	15	0	0	0	0	15	5.7
Libya	62	0	0	0	0	62	17.1
Luxembourg	83	5	0	0	13	101	276.7
Morocco	203	0	0	0	0	203	9.5
Netherlands	1 870	155	0	440	1 694	4 1 5 9	288.6
Norway	199	4	5	24	709	941	226.7
Poland	1 055	0	50	15	384	1 504	40.7
Portugal	1 823	0	1	3	187	2014	197.4
Spain	7 872	290	50	545	2 098	10 855	281.8
Sweden	823	75	22	231	1 506	2 657	318.7
Switzerland	1015	169	1	276	1 057	2 518	383.1
Tunisia	282	0	1	15	0	298	42.2
Turkey	774	0	79	12	104	969	20.1
United Kingdom	1 923	2033	52	2373	5 773	12 154	215.8
Yugoslavia	2713	73	79	69	225	3 159	137.6
Total Registry	67 868	7445	986	7538	25 288	109 125	176.0

National Keymen. For centres which returned the centre questionnaire but failed to complete the question on new patients, the data have been treated as missing. This is not always correct, as some of these centres may indeed have had no patients commencing renal replacement therapy (RRT) in 1985. The numbers of new patients accepted onto treatment in 1985 are shown both as absolute numbers and expressed per million population [3]. The acceptance rate for new patients in 1985 exceeded 60 per million population in Austria, Belgium and Sweden.

The total number of patients alive on different forms of renal replacement therapy at the end of 1985 is shown by country in Table 3. The Table also gives the total number of patients alive on treatment per million population on 31 December 1985.

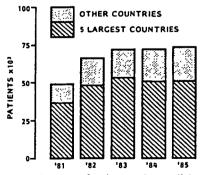


Fig. 1. Numbers of patients on haemodialysis 1981–1985, as reported on the centre questionnaire. Results for five large Western European countries, the Federal Republic of Germany, France, Italy, Spain and the United Kingdom, have been shown separately.

Table 4. Number of patients alive on special forms of dialysis/haemofiltration on 31 December 1985: based on data from the centre questionnaire

Country	Haemod	ialysis/haemo	ofiltration		Peritoneal dial.		
	Bicarb. HD	Haemo- filtration	Haemodia- filtration	HD+Haemo- perfusion	CCPD	PD+HD	
Algeria	0	0	21	25	0	ı	
Austria	142	41	20	3	1	13	
Belgium	886	76	79	1	23	1	
Bulgaria	0	52	6	9	1	0	
Cyprus	0	0	0	14	0	0	
Czechoslovakia	5	53	32	6	0	0	
Denmark	44	23	36	1	0	2	
Egypt	0	21	36	18	. 0	ī	
Fed Rep Germany	2 657	799	324	103	14	33	
Finland	107	i	0	0	0	0	
France	2 471	201	163	6	40	5	
German Dem Rep	293	47	0	25	0	Ō	
Greece	216	88	38	5	Ō	Ō	
Hungary	6	71	0	20	Ö	10	
Iceland	Ö	0	Ö	0	Ö	0	
Ireland	6	Ŏ	Ŏ	Ō	Ö	Ö	
Israel	30	26	128	25	Ö	Ö	
Italy	3 035	484	383	43	10	4	
Lebanon	0	0	0	0	0	Ó	
Libya	ŏ	ŏ	ŏ	Ŏ	ŏ	Ŏ	
Luxembourg	16	i	7	Ŏ	Ŏ	Ŏ	
Morocco	10	ò	Ó	Ŏ	ŏ	ŏ	
Netherlands	288	34	ğ	6	ì	Ö	
Norway	7	5	4	Õ	ō	ŏ	
Poland	36	7	86	2	ĭ	ğ	
Portugal	0	Ó	0	ō	i	Ó	
Spain	779	275	189	212	19	4	
Sweden	38	30	6	1	3	ó	
Switzerland	154	54	26	17	2	ĭ	
Tunisia	0	60	69	Ô	ō	ò	
Turkey	11	15	20	ŏ	ŏ	9	
United Kingdom	164	13	85	ŏ	138	11	
Yugoslavia	56	87	40	56	3	7	
Total Registry	11 457	2564	1807	598	257	111	

The growth of the number of patients treated by haemodialysis in the years 1981–1985 is shown in Fig. 1. Results for the five largest countries reporting to the Registry, the Federal Republic of Germany, France, Italy, Spain and the United Kingdom, are shown separately.

Table 4 shows the number of patients on special forms of dialysis or haemofiltration on 31 December 1985. The number of patients alive on bicarbonate haemodialysis increased to 11 457 compared to 7534 reported on the 1984 centre questionnaire [2]. The numbers on haemofiltration, haemodiafiltration and CCPD also increased. For the first time, the 1985 centre questionnaire requested information on patients treated by haemodialysis plus haemoperfusion, and the results are given in Table 4. The proportion of patients on haemodialysis treated by haemofiltration or bicarbonate haemodialysis increased

between 1982 and 1985 (Fig. 2). The rise was particularly notable for bicarbonate haemodialysis. Figure 3 shows that whereas the proportion of patients treated by home haemodialysis declined from 1981 to 1985, that on CAPD increased. This trend was analysed separately for five selected European countries, the United Kingdom, France, the Federal Republic of Germany, Italy and Spain, and the results are given in Fig. 4. The proportion of patients treated by CAPD between 1981 and 1985 rose most dramatically in the United Kingdom.

Transplant activity in 1985, based on data from the centre questionnaire, is shown in Table 5. Wherever possible, missing information was collected through National Keymen. The use of grafts from living donors contributed substantially to the high transplantation rate in Scandinavian countries: in Norway, 50% of all first grafts performed in 1985 came from that source.

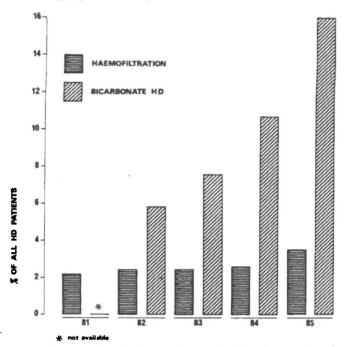


Fig. 2. The proportion of patients on haemodialysis on 31 December of each of the years 1981 1985 treated by haemofiltration and bicarbonate haemodialysis, as reported on the centre questionnaire.

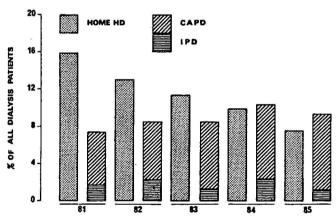


Fig. 3. The proportion of all patients on dialysis on 31 December of each of the years 1981-1985 treated by home haemodialysis, continuous ambulatory peritoneal dialysis and intermittent peritoneal dialysis, as reported on the centre questionnaire.

## Re-use of Dialysers and Dialysis Equipment

Information on use and re-use of individual dialysers is collected on the patient questionnaire. However, the 1985 centre questionnaire included a question on re-use techniques, the results of which are summarised in Table 6. The proportion of centres which replied to the question,

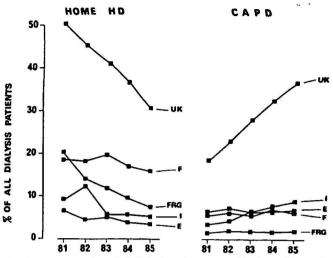


Fig. 4. The proportion of all dialysis patients treated by home haemodialysis and continuous ambulatory peritoneal dialysis on 31 December of each of the years 1981 1985 as reported on the centre questionnaire in five selected European countries. UK, United Kingdom; F, France; FRG, Federal Republic of Germany; I, Italy; E, Spain.

the proportion of these which reported re-use, and the techniques employed, are shown. Of the 78.9% of known centres which responded to the question, 11.7% reported re-use in 1985. Some centres indicated more than one re-use technique.

A question on dialysis equipment, included on the 1983 centre questionnaire, was repeated in 1985 [4]. The results of the latest enquiry are shown in Table 7. Results are given by country and include the proportion of centres which replied to the question, together with the numbers of the different types of dialysis machines. The proportion of these machines in homes is also indicated.

#### **Transplantation**

An important part of the centre questionnaire is devoted to transplant information (Table 5). A question on waiting lists for cadaver transplants included on the 1984 centre questionnaire was widely misunderstood, and a revised version was therefore included for a second time in 1985. The results are shown in Table 8, which gives the proportion of patients registered on a waiting list for a cadaver transplant in 1985 as reported by dialysis centres. Although the differences between countries were remarkable, they did not have a clear relationship to the overall transplantation rate.

For the first time, the 1985 centre questionnaire included a question on the proportion of patients on waiting lists for a cadaver transplant who were highly sensitised ('most recent serum reacting with more than

Table 5. Transplant activity in 1985 based on data from the centre questionnaire, supplemented by information from National Keymen. The Table gives the total number of grafts performed in 1985 as an absolute number and also expressed per million population (PMP). The total numbers of grafts performed in all years until the end of 1985 are shown in the extreme right-hand column

Country	Cada	ver		Livin	g Dono	r	Total*	_	Total grafts
	lst graft	Pats. < 15	Total CAD grafts	lst graft	Pats. < 15	Total LD grafts	All grafts	РМР	performed all years
Algeria		0	1	0	0	0	1	<0.1	1
Austria	135	10	160	7	2	7	167	22.2	1 196
Belgium	216	21	248	40	5	42	290	29.4	3 3 5 4
Bulgaria	9	0	9	0	0	0	9	1.0	28
Cyprus	0	0	0	0	0	0	0	0.0	0
Czechoslovakia	127	2	143	0	0	I	144	9.3	1 120
Denmark	_	5	195	9	0	13	208	40.7	2 3 7 6
Egypt	0	0	0	56	1	57	57	1.2	168
Fed Rep Germany	973	67	1160	61	8	63	1274	20.8	7 422
Finland	107	2	134	7	0	7	141	28.8	1 661
France	679	65	833	24	5	36	1157	21.0	7 067
German Dem Rep	161	7	170	4	0	4	174	10.4	1 522
Greece	9	0	13	9	1	18	31	3.1	296
Hungary	58	1	64	7	1	8	72	6.7	407
Iceland	0	0	0	0	0	0	0	0.0	0
Ireland	40	3	52	20	5	20	72	20.4	664
Israel	59	10	75	30	1	39	114	27.3	628
Italy	335	14	355	17	2	19	374	6.6	2 3 7 3
Lebanon	0	0	0	0	0	0	0	0.0	0
Libya	0	0	0	0	0	0	0	0.0	0
Luxembourg	7	0	7	2	0	2	9	24.7	18
Morocco	0	0	0	0	0	0	0	0.0	0
Netherlands	_	20	289	15	3	34	323	22.4	
Norway	76	1	99	76	2	80	179	43.1	1 433
Poland	142	5	147	1	1	4	151	4.1	746
Portugal	94	2	99	0	0	0	99	9.7	296
Spain	739	36	825	49	10	55	956	24.8	3919
Sweden	197	3	262	57	8	65	331	39.7	3 781
Switzerland	117	2	203	7	1	10	213	32.4	2 285
Tunisia	0	ō	0	0	0	0	0	0.0	0
Turkey	6	Ŏ	7	58	0	58	65	1.3	467
United Kingdom	1059	105	1367	178	7	188	1555	27.6	13 575
Yugoslavia	35	0	35	33	1	36	71	3.1	447
Total Registry	5381	381	6952	767	64	866	8237	13.3	57 250

<sup>\*</sup>Data from centre questionnaire supplemented from other sources

80% of a random donor panel'). Table 9 shows the number of patients on a waiting list for a cadaver transplant as reported by transplant centres, and the proportion of these highly sensitised. Overall, 10.8% of patients fell into this particular category, where it is difficult to find a suitable graft.

Cyclosporin (CyA) was used as prophylactic immunosuppression after renal transplantation in approximately 50% of all transplant centres in 1983. In 1984, this figure increased to 60%, a proportion which did not change in 1985 (Fig. 5). Dosages of CyA used in the first week after transplantation have fallen within the last year (Fig. 6). An initial dosage of 14–15 mg/kg per day was by far the most frequently reported in 1984, and less than 10 mg/kg per day was given in only a small proportion of centres. In contrast, in 1985, an initial dosage of 10–11 mg/kg per day was as frequently used as the former 'standard' dosage of 14–15 mg/kg per day, and more than one-third of all transplant centres reported initial dosages below 10 mg/kg per day.

Figure 7 shows the regimens most commonly used during the first week after grafting by units which reported use of cyclosporin in 1985. Only 5% of these centres used CyA alone, i.e. without any other immunosuppressive drug. By far the most common regime was a combination of CyA with steroids, used by 59% of all transplant centres. CyA was not used in the first week in 17% of those units reporting use of the drug in 1985, which suggests

<sup>-</sup> Data unavailable

Table 6. The proportion of centres which reported re-using dialysers in 1985, as reported on the centre questionnaire. The Table gives the number of centres which replied to this question, and the technique used by centres which reported re-use

Country	Re-use of di	alysers		Techniques used (n centres)			
	% centres replied	Centre re-usin		Manual	Re-use cycle on proportionating machine	Separate automatic machine	
		%	n				
Algeria	85.7	0	0	0	0	0	
Austria	88.9	0	0	0	0	0	
Belgium	93.2	14.6	8	2	3	4	
Bulgaria	92.1	91.4	32	21	3	6	
Cyprus	100.0	0	0	0	0	0	
Czechoslovakia	96.3	3.9	ì	0	0	1	
Denmark	100.0	9.1	1	0	0	1	
Egypt	54.8	11.8	2	I	0	0	
Fed Rep Germany	74.0	3.3	8	4	0	4	
Finland	92.6	0	0	0	0	0	
France	85.7	13.0	24	18	1	3	
German Dem Rep	98.2	0	0	0	0	0	
Greece	58.8	0	0	0	0	0	
Hungary	92.3	8.3	1	0	1	0	
lceland	100.0	0	0	0	0	0	
Ireland	100.0	0	0	0	0	0	
Israel	89.7	11.5	3	2	0	1	
Italy	63.5	5.2	13	8	0	3	
Lebanon	14.3	0	0	0	0	0	
Libya	33.3	0	0	0	0	0	
Luxembourg	100.0	20.0	1	0	1	0	
Morocco	100.0	0	0	0	0	0	
Netherlands	82.0	0	0	0	0	0	
Norway	100.0	11.8	2	2	0	0	
Poland	90.7	71.4	35	34	5	0	
Portugal	77.5	32.3	10	7	0	7	
Spain	87.4	6.9	12	2	0	9	
Sweden	94.3	0	0	0	0	0	
Switzerland	94.7	19.4	7	5	2	1	
Tunisia	100.0	0	0	0	0	0	
Turkey	84.2	0	0	0	0	0	
United Kingdom	88.1	33.9	20	14	5	7	
Yugoslavia	67.8	1.7	1	0	0	0	
Total Registry	78.9	11.7	181	120	21	47	

that they either restricted its use for special patients or started the drug after the first week post-transplant, probably to avoid nephrotoxic effects in the early and vulnerable postoperative period. The use of 'triple drug therapy' (combination of CyA, azathioprine and steroids) was reported by 15% of centres as the most common form of immunosuppression during the first week after renal transplantation in 1985. Almost half (48%) of centres reported use of 'triple drug therapy' for prophylactic immunosuppression in one or more patients during 1985.

### AIDS and Hepatitis

So far, few reports exist about infection with human immunodeficiency virus (HTLV-III/LAV) in patients on

renal replacement therapy. On the 1985 centre questionnaire, an enquiry was made about current policies in testing for HTLV-III/LAV antibodies and cases of acquired immune deficiency syndrome (AIDS). Testing for HTLV-III/LAV antibodies was reported in 'most or all patients' in 30% of all centres which answered this enquiry, while in 13%, only 'selected patients' were tested (Table 10). No testing for HTLV-III/LAV antibodies was reported by 57% of units. Practice on testing for antibodies differed markedly from country to country and was not obviously influenced by the number of deaths attributed to AIDS in patients with end-stage renal failure (Table 10). In Sweden, where no AIDS deaths were reported to the Registry in patients with end-stage renal failure, two-thirds of all centres tested for anti-HTLV-III/LAV, whereas in Italy, where two AIDS deaths were

Table 7. Summary of dialysis equipment in use in Europe at the end of 1985. The numbers of haemodialysis, haemofiltration and peritoneal dialysis machines are shown, together with the proportion of these in homes

Country	Centres replied %	Haemo	odialysis	machines			Haemo _ machin	filtration es	Peritone dialysis	eal machines	Total	
	-				Total				_			
·		VCU n	BIC n	Vary Na	n	Home %	n	Home %	n	Home %	п	Home %
Algeria	86	9	0	0	80	3.8	0	0	6	16.7	86	4.7
Austria	85	180	67	265	328	14.6	20	0	5	20.0	353	13.9
Belgium	93	415	237	262	705	8.2	94	9.6	17	17.7	816	8.6
Bulgaria	87	96	8	142	208	0	9	0	2	0	219	0
Cyprus	100	0	0	0	25	0	0	0	0	0	25	0
Czechoslovakia	93	27	6	36	221	0.9	8	0	4	0	233	0.9
Denmark	91	49	23	32	214	23.8	7	0	31	22.6	252	23.0
Egypt	52	40	2	43	163	0	11	0	6	0	180	0
Fed Rep Germany	75	2880	1332	4 549	6 729	16.9	459	3.5	192	7.8	7 380	15.9
Finland	96	37	55	59	206	1.0	2	0	5	0	213	0.9
France	87	1921	879	1 682	4 067	43.6	114	12.3	202	15.4	4 383	41.5
German Dem Rep	91	9	57	270	409	0	15	0	16	37.5	440	1.4
Greece	59	70	24	159	311	0	2	0	12	0	325	0
Hungary	92	2	2	18	93	0	1	0	7	0	101	0
Iceland	100	0	0	0	7	0	0	0	0	0	7	0
Ireland	100	15	2	2	85	28.2	0	0	5	0	90	26.7
Israel	97	161	40	130	317	14.2	I	0	4	0	322	14.0
Italy	64	881	1122	2 702	5 003	14.5	209	0.5	357	5.0	5 569	13.3
Lebanon	14	3	0	3	6	0	0	0	0	0	6	0
Libya	33	2	2	0	10	0	0	0	1	0	11	0
Luxembourg	100	5	9	5	44	11.4	6	0	1	0	51	9.8
Morocco	100	0	2	0	21	0	0	0	0	0	21	0
Netherlands -	80	273	157	183	658	7.3	26	0	21	9.5	705	7.1
Norway	100	69	10	52	178	2.8	7	0	1	0	186	2.7
Poland	93	66	23	117	355	0	3	0	14	7.1	372	0.1
Portugal	80	169	14	107	516	0	0	0	9	0	525	0
Spain	86	935	359	1 242	2 900	9.3	78	0	104	0	3 082	8.7
Sweden	94	75	28	149	419	11.2	20	0	38	2.6	477	10.1
Switzerland	95	167	85	154	523	28.9	15	0	70	2.9	608	25.2
Tunisia	100	26	0	31	104	0	0	0	2	0	106	0
Turkey	63	29	2	42	123	0	2	0	1	0	126	0
United Kingdom	85	842	191	1008	3364	57.4	23	0	185	17.3	3572	54.9
Yugoslavia	64	288	24	369	1 899	2.4	24	4.2	8	12.5	1 931	2.4
Total Registry	78	9741	4762	13 813	31 072	20.5	1156	3.6	1326	9.1	33 554	19.5

VCU. volume controlled ultrafiltration monitor; BIC. bicarbonate dialysate module; Vary Na, variable dialysate sodium concentration

reported, only one-third of centres reported testing. In Norway, unlike Sweden, few 'selected' patients were tested in 1985.

Figure 8 shows the number of new cases of hepatitis B diagnosed in the years 1980–1985 in both patients and staff, expressed per thousand patients on hospital haemodialysis at the end of each year. The ratio in patients declined rapidly from about 44 per thousand in 1980 to 24 per thousand in 1982, and subsequently remained stable. A decline in the ratio for staff was also observed in this period. However, large variations in the frequency of hepatitis were still found between countries (Table 11). The ratio of cases of hepatitis B per thousand alive on hospital haemodialysis in 1985 exceeded 100 in Czechoslovakia, Egypt, the German Democratic Republic, and

Tunisia. Similarly, high rates for cases among staff were observed in Algeria, the German Democratic Republic, and Poland.

#### **Paediatric Information**

Each year, the centre questionnaire contains a section requesting information on the treatment of children by dialysis and transplantation. Table 12 shows new paediatric patients accepted for renal replacement therapy in 1985 by type of centre, self-defined as specialised for paediatric patients or not, on the centre questionnaire. The total number of new patients include those taken on from foreign countries who were not included in the calculation

Table 8. Proportion of dialysis patients on a waiting list for cadaver transplant as reported by dialysis centres on the 1985 centre questionnaire

Country	Per cent patients	Country patients	Per cent
<del></del>			
Algeria	22.0	Italy	17.7
Austria	30.6	Lebanon	6.7
Belgium	13.2	Libya	0
Bulgaria	20.8	Luxembourg	25.8
Cyprus	38.5	Morocco	8.6
Czechoslovakia	52.8	Netherlands	31.0
Denmark	25.4	Norway	41.4
Egypt	1.4	Poland	65.8
Fed. Rep Germany	20.3	Portugal	25.1
Finland	45.3	Spain	43.9
France	15.4	Sweden	25.9
German Dem Rep	28.4	Switzerland	21.7
Greece	16.8	Tunisia	21.8
Hungary	58.1	Turkey	35.1
Iceland	0	United Kingdom	41.5
Ireland	46.0	Yugoslavia	32.4
Israel	16.8	0	
		Total Registry	25.6

Table 9. The number of patients on a waiting list for a cadaver transplant, and the proportion highly sensitised as reported by transplant units on the 1985 centre questionnaire

Country	Number on waiting list	Per cent highly sensitised
Algeria	32	25.0
Austria	515	15.2
Belgium	378	9.3
Bulgaria	486	0.8
Cyprus	0	0
Czechoslovakia	530	10.6
Denmark	84	23.8
Egypt	3	0
Fed Rep Germany	4 054	4.7
Finland	186	22.0
France	2 347	17.9
German Dem Rep	447	21.0
Greece	110	8.2
Hungary	464	11.2
Iceland	0	0
Ireland	147	19.1
Israel	127	14.2
Italy	1 928	9.2
Lebanon	0	0
Libya	0	0
Luxembourg	22	4.6
Morocco	0	0
Netherlands	659	19.9
Norway	110	11.8
Poland	1 448	7.5
Portugal	677	4.7
Spain	4 284	10.7
Sweden	358	10.3
Switzerland	173	19.8
Tunisia	13	0
Turkey	326	3.1
United Kingdom	2 675	13.5
Yugoslavia	1 089	12.4
Total Registry	23 672	10.8

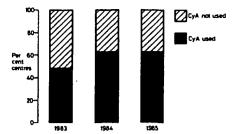


Fig. 5. The proportion of transplant centres which reported use of cyclosporin for prophylactic immunosuppression on the centre questionnaire in 1983, 1984 and 1985.

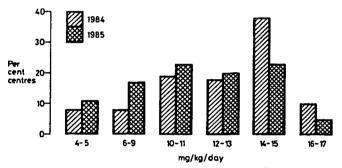


Fig. 6. Frequency distribution of oral dose of cyclosporin 'most commonly used' in the first week post-transplant, as reported by transplant centres on the 1984 and 1985 centre questionnaire.

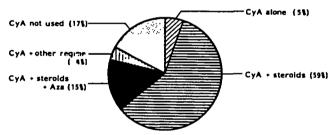


Fig. 7. Regimen most commonly used for prophylactic immunosuppression during the first week after transplant by centres which reported use of cyclosporin (CyA) on the 1985 centre questionnaire. Aza, azathioprine.

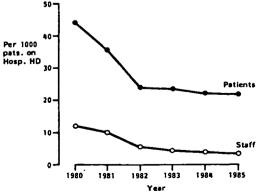


Fig. 8. New cases of hepatitis B diagnosed in patients and staff in each of the years 1980–1985, expressed per thousand patients on hospital haemodialysis at the end of each year.

Table 10. Summary of information on AIDS provided on the 1985 centre questionnaire. The Table shows practice of centres in testing for HTLV-III/LAV antibodies by country. Cases of AIDS and deaths from the disease in patients on renal replacement therapy are also shown. The proportion of centres which responded to the section on AIDS is given by country

Country	Testing	for AIDS (% ce	ntres)	Cases of AII	OS (n)	% Centres replied	
	No testing	In selected patients	In most or all patients	Suspected cases	Deaths	-	
Algeria	100	0	0	0	0	71.4	
Austria	16	8	76	8	0	92.6	
Belgium	46	6	48	3	0	89.8	
Bulgaria	93	0	7	0	0	71.1	
Cyprus	100	0	0	0	0	75.0	
Czechoslovakia	100	0	0	0	0	88.9	
Denmark	50	0	50	0	0	90.9	
Egypt	100	0	0	0	0	38.7	
Fed Rep Germany	39	18	43	22	2	74.6	
Finland	62	12	27	0	0	96.3	
France	33	15	52	31	4	83.8	
German Dem Rep	94	6	0	5	0	96.3	
Greece	28	3	69	Ō	0	54.9	
Hungary	100	0	0	Ó	0	76.9	
Iceland	100	0	0	Ö	0	100.0	
Ireland	100	0	0	Ō	0	100.0	
Israel	78	19	4	6	0	93.1	
Italy	59	9	32	13	2	62.5	
Lebanon	100	0	0	0	0	14.3	
Libya	100	Ô	Ö	Ö	Ō	33.3	
Luxembourg	40	20	40	Ö	Ō	100.0	
Morocco	100	0	Ö	Ö	Õ	0.001	
Netherlands	83	10	8	ī	Ō	78.0	
Norway	82	18	Ō	Ö	ŏ	100.0	
Poland	88	0	12	ŏ	ŏ	90.7	
Portugal	36	ğ	55	ŏ	ŏ	82.5	
Spain	60	31	10	11	ĭ	81.9	
Sweden	24	3	74	0	Ö	97.1	
Switzerland	53	17	31	2	Ŏ	94.7	
Tunisia	50	13	38	ō	ŏ	80.0	
Turkey	85	0	15	ő	ŏ	68.4	
United Kingdom	70	22	8	9	i	88.1	
Yugoslavia	85	9	6	16	ò	62.1	
Total Registry	57	13	30	127	10	76.4	

of acceptance rate per million child population (pmcp) given in the Table.

Table 13 shows the numbers of patients aged less than 15 years alive on any form of dialysis/haemofiltration at the end of 1985 by type of centre. The proportion of these children treated in specialised paediatric centres (self-defined on the centre questionnaire) is given.

#### **Conclusions**

In recent years the EDTA centre questionnaire has become an increasingly important source of demographic information about renal replacement therapy. It is possible to collect and analyse these questionnaires long before data from the individual patient questionnaire

becomes available. Figures from the two sources often vary, for reasons outlined above, with centre questionnaire data producing slightly higher numbers for patients on renal replacement therapy than the patient questionnaire.

Active steps are taken to ascertain information on units which do not return the centre questionnaire, through the National Keymen. However, even these measures do not produce complete coverage, and the shortfall in data varies from country to country (Table 1). It is in the mutual interest of the renal care community at large to provide as comprehensive data as possible to the EDTA Registry, and the Registration Committee therefore welcomes suggestions on how completeness and quality of information may be improved.

Table 11. Hepatitis diagnosed in patients and staff in 1985 as reported on the centre questionnaire. The numbers of cases of hepatitis B are shown in absolute numbers and also expressed per thousand patients on hospital haemodialysis at the end of the year. Numbers of cases of hepatitis A and hepatitis non-A non-B are also shown

Country	Patients				Staff			
	Нер В	Cases/1000 pats on Hosp. HD	Hep A	Hep non-A non-B	Нер В	Cases/1000 pats on Hosp. HD	Hep A	Hep non-A non-B
Algeria	18	76.6	0	1		21.3	0	0
Austria	44	33.0	0	9	0	0	0	0
Belgium	38	17.8	2	21	2	0.9	3	2
Bulgaria	16	18.2	Ô	0	4	4.5	I	1
Cyprus	2	16.4	0	2	0	0	0	0
Czechoslovakia	105	119.6	7	15	13	14.8	Ō	Ĭ
Denmark	0	0	0	0	0	0	Ō	0
Egypt	96	103.6	ĭ	Ö	5	5.4	Õ	ì
Fed Rep Germany	68	5.0	2	82	4	0.3	Ō	5
Finland	0	0	ī	1	Ó	0	Ō	0
France	89	·9.1	4	133	2	2.0	0	4
German Dem Rep	184	109.8	4	31	62	37.0	Ö	5
Greece	9	8.2	2	16	1	0.9	Ō	Ō
Hungary	17	37.5	0	7	9	19.9	Ö	ì
lceland	0	0	Ŏ	0	Ó	0	Ō	Ö
Ireland	Ō	Ō	0	0	Ō	Ō	Ō	0
Israel	4	4.7	Ĭ	34	Ŏ	Ö	Ö	Ĭ
Italy	144	12.5	0	155	15	1.3	2	9
Lebanon	0	0	Ŏ	0	0	0	ō	Ó
Libya	ì	16.1	Ö	0	i	16.1	Ō	Ô
Luxembourg	4	48.2	Ö	0	Ō	0	0	0
Morocco	3	32.3	Ŏ	ŏ	ŏ	ŏ	ŏ	ŏ
Netherlands	3	1.9	2	9	Ŏ	<b>0</b> .	Ö	0
Norway	ō	0	Ō	3	ō	Ō	Ō	Ō
Poland	89	85.4	Ō	4	38	36.5	2	i
Portugal	51	28.0	2	43	22	12.1	ī	0
Spain	96	13.1	3	139	14	1.9	2	Š
Sweden	ő	0	ő	7	Ö	0	Õ	Õ
Switzerland	i	1.1	Ŏ	8	ő	Ö	ŏ	i
Tunisia	30	106.4	Ö	ì	2	7.1	ŏ	ò
Turkev	54	79.6	2	ó	6	8.8	Õ	Ŏ
United Kingdom	6	3.1	õ	18	i .	0.5	ŏ	ŏ
Yugoslavia	212	78.1	21	5	30	11.1	ŏ	i
Total Registry	1384	21.0	54	744	236	3.6	11	38

Table 12. Number of new paediatric patients accepted onto renal replacement therapy in specialised (with number of specialised units shown in brackets) and non-specialised centres in 1985. The Table is based on information provided on the 1985 centre questionnaire and also shows the total number of new patients per million child population (PMCP). The number of new patients from foreign countries is shown separately and was not included in the calculation of the acceptance rate PMCP

Country	Patients in specialised centres (n centres)	Patients in non- specialised centres	Total n patients	Patients PMCP	Foreign new patients
Algeria	10 (2)	1	11	1.2	0
Austria	0 (0)	6	6	3.5	1
Belgium	13 (4)	0	13	5.2	3
Bulgaria	3(1)	0	3	1.0	1
Cyprus	0 (0)	0	0	0	0
Czechoslovakia	5 (2)	2	7	1.9	0
Denmark	0 (0)	9	9	9.0	0
Egypt	0 (0)	8	8	0.5	0

Table 12 continued top of next page

Table 12. (Continued)

Country	Patients in specialised centres (n centres)	Patients in non- specialised centres	Total n patients	Patients PMCP	Foreign new patients
Fed Rep Germany	45 (14)	8	53	5.0	4
Finland	2(1)	1	3	3.1	0
France	79 (17)	11	90	6.3	14
German Dem Rep	14 (4)	2	16	4.7	l
Greece	3(1)	2	5	2.3	0
Hungary	6(1)	6	12	4.7	1
Iceland	0 (0)	0	0	0	0
Ireland	7(1)	0	7	5.6	1
Israel	5 (3)	5	10	7.2	0
Italy	26 (9)	28	54	4.0	5
Lebanon	0 (0)	2	2	1.9	0
Libya	0 (0)	0	0	0	0
Luxembourg	0 (0)	0	0	0	0
Morocco	0 (0)	1	l	1.0	0
Netherlands	21 (4)	0	21	6.4	2
Norway	0(0)	4	4	4.6	0
Poland	27 (7)	1	28	3.0	0
Portugal	4 (2)	3	7	2.9	0
Spain	20 (8)	15	35	3.5	0
Sweden	0(1)	12	12	7.7	0
Switzerland	6 (3)	1	7	6.3	0
Tunisia	0(0)	0	0	0	0
Turkey	0(1)	10	10	0.5	0
United Kingdom	59 (9)	18	77	6.5	3
Yugoslavia	11 (2)	9	20	3.4	1
Total Registry	366 (97)	165	531		37

Table 13. The number of children on dialysis on 31 December 1985 shown by type of centre. The Table is based on information provided on the 1985 centre questionnaire and also shows the proportion of children dialysed in specialised paediatric centres

Country	Children on dialysis on 31 December 1985					
	Specialised centres	Non-specialised centres	Total	% Treated in specialised centres		
Algeria	10	5	15	67		
Austria	0	6	6	0		
Belgium	24	2	26	92		
Bulgaria	3	3	6	50		
Cyprus	0	0	0	0		
Czechoslovakia	3	2	5	60		
Denmark	0	9	9	0		
Egypt	0	7	7	0		
Fed Rep Germany	77	14	91	85		
Finland	1	2	3	33		
France	183	33	216	85		
German Dem Rep	33	2	35	94		
Greece	2	4	6	33		
Hungary	3	7	10	30		
Iceland	0	2	2	0		
Ireland	1	2 3	4	25		
Israel	13	6	19	68		
Italy	60	36	96	63		
Lebanon	0	0	0	0		
Libya	0	0	0	0		
Luxembourg	0	1	1	0		

Table 13 continued top of next page

Table 13. (Continued)

Country	Children on dialysis on 31 December 1985						
	Specialised centres	Non-specialised centres	Total	% Treated in specialised centres			
Morocco	0	0	0	0			
Netherlands	41	0	41	100			
Norway	0	1	1	0			
Poland	39	4	43	91			
Portugal	19	9	28	68			
Spain	43	32	75	57			
Sweden	0	3	3	0			
Switzerland	14	1	15	93			
Tunisia	0	1	1	0			
Turkey	4	10	14	29			
United Kingdom	96	31	127	76			
Yugoslavia	16	13	29	55			
Total Registry	685	249	934	73			

This paper has summarised information obtained on the 1985 EDTA centre questionnaire, and discussed trends in renal replacement therapy: the growth in numbers treated by haemodialysis (including the special forms), the declining importance of home haemodialysis, the growth of CAPD and the remarkable transplantation rates achieved by some countries.

Where possible, comparisons have been made between countries. Interpretation of the trends and differences demonstrated is difficult because of the many economic, social and medical factors that influence the pattern of renal replacement services offered in different parts of Europe. The data are presented in order that individual

countries may review their own performance and perhaps learn from different patterns of care offered elsewhere.

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